

PRODUCTION VOLUMES/DISTRIBUTION

Within the Paint and Allied Products Industry (SIC 2851) group, automotive refinishes are aggregated under the transportation and machinery refinishes subset (SIC 2851313) of the special purpose coatings category (SIC 28513) and covers not only automotive refinishes but also other transportation (e.g., light- and/or heavy-duty vehicles such as trucks, vans, sport utility and recreational vehicles, buses, aircraft, railroad cars, and automotive parts) and machinery and equipment refinish paints and enamels, including primers.

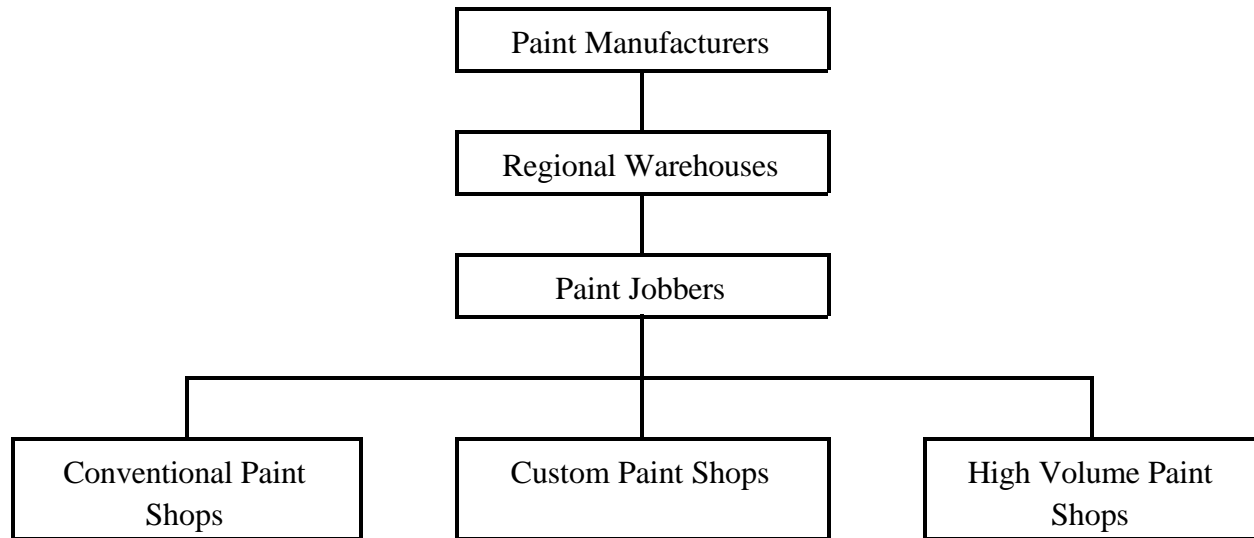
Time series data extracted from the Bureau of the Census' Current Industrial Reports for 1990 - 1994 are presented in Appendix C for the transportation and machinery subset. One industry source has indicated that in 1990, consumption of auto refinishes comprised approximately 75% of this category with the balance allocated between other transportation (17%; trucks, buses, vans, etc.) and machinery refinishing (8%) (Rauch 1991).

In the late 1980s, transportation and machinery refinishes included: specially designed acrylic enamels (36%); lacquers, mainly acrylic (33%); base coat/top coat (17%), acrylic urethane (9%); and, synthetic enamels (5%) (Rauch 1991).

Channels of distribution vary significantly between the refinish and OEM markets. The first market is characterized by thousands of end-users, often operating independently; thus, developing strong distribution channels is more of a challenge in refinishing products. In the OEM market, distribution is a less complex issue due to the limited number of light vehicle manufacturers operating in North America. However, as each vehicle production/assembly plant varies in terms of equipment for the application of finishes, OEM distribution channels are geared toward addressing plants rather than light vehicle companies (Freedonia 1991).

The automotive refinishing trade is so widespread across the nation that an individual in any state, in any type of motor vehicle, can have paint repairs done which will be acceptable in quality and color to the OEM finishes used. This is due, in part, to the huge volume of motor vehicles on the road and the need for convenient automotive service and repair shops (Chudy 1982). A basic flowchart depicting the distribution channels making this possible is presented in Figure 1.

Figure 1. Automotive Refinishing Trade Channels of Distribution (Chudy 1982).



Paint manufacturers produce paints for the OEM and/or refinishing markets. OEM paints are formulated primarily to undergo "high-baked" curing; whereas, refinishing paints are composed of slightly different compounds to allow for air-dry or slightly elevated ambient temperature curing (Chudy 1982). Large paint manufacturers may service several regions; whereas, small manufacturers may only serve a particular region.

In each of its regions, the paint manufacturer has a refinish warehouse which is stocked with complete lines of refinishing products for fast distribution to all paint jobbers. Refinish warehouses are wholesale distributors of paint products and do not sell to the general public (Chudy 1982). Distributors usually offer services other than just selling. They can be helpful in ensuring fast service, technical support, credit extension, inventory management and personal attention. In a world becoming more attuned to just-in-time delivery, zero-defect manufacturing, and strict quality control, the role of the distributor is growing in importance (Freedonia 1991).

Paint jobbers supply a complete line of refinishing products (e.g., paints, fillers, sandpaper, masking tape, striping tape, paint mixing equipment, etc.) to all paint shops in the automotive refinishing market. Refinished products can also be sold to vocational schools but are not intended for sale to the general public (Chudy 1982).

Paint shops can be divided into many categories, depending on the type of painting performed. However, the three most common categories of paint shops include: conventional; high-volume, low-cost; and, custom (Chudy 1982). Appendix D presents 1992 Economic Census data on the number

of companies, number of establishments, number of employees, and sales (receipts) for the selected SIC Codes that relate to the automotive coating industry. The number of establishments presented represents those establishments whose primary business activity is covered by the appropriate SIC code. Based on the information presented in Appendix D, there are up to 60,000 facilities that conduct automobile painting. This includes all facilities conducting auto body repair and all new and used car dealerships because Bayer Corporation has indicated that a significant amount of these facilities conduct painting operations, although some may not.

- *Conventional paint shops* do most of the paint work in the aftermarket since they greatly outnumber all other paint shops. They use refinishing materials in accordance with factory recommendations and work in close cooperation with insurance companies and collision repair shops (Chudy 1982).
- *High-volume, low-cost paint shops* do a good share of the refinishing business nationally but offer a limited set of colors. These shops are set up like a small assembly line employing production-line-type specialists to do surface preparation and masking (Chudy 1982).
- *Custom paint shops* have the ability to do the best quality work but are the most expensive. Their artistic and refinishing skills are the most advanced in the trade. Custom painting involves the use of exotic color materials and systems not used on OEM vehicles (Chudy 1982).

Another source estimates that based on survey data there are 50,000 autobody shops and are employing 75,000 painters. (BASF, 1996)

APPENDIX C

PAINT AND ALLIED PRODUCTS: QUANTITY (000 GALLONS) AND VALUE (\$000) FOR SELECTED SIC CODES, 1990 - 1994

Year	Item	Total Paints & Allied Products (2851	Total Architectural Coatings (28511)	Total OEM Product Finishes (28512	Special Purpose Coatings		Total Miscellaneous Products (28515)
					Total (28513)	Refinishes ¹ (2851313)	
1990	Quantity % Quantity	1,231,759 100.00%	558,438 45.34%	325,566 26.43% 100.00%	184,542 14.98% 37.06%	63,385 NA	163,213 13.25%
	Value % Value	12,424,316 100.00%	4,913,598 39.55%	3,877,474 31.21% 100.00%	2,624,041 21.12% 48.50%	1,272,607 NA	1,990,203 8.12%
	\$/Gal	\$10.09	\$8.80	\$11.91	\$14.22	\$18.61	\$6.18
1991	Quantity % Quantity	1,178,366 100.00%	537,939 45.65%	308,123 26.15% 100.00%	169,367 14.37% 28.07%	47,536 NA	162,937 13.83%
	Value % Value	12,536,222 100.00%	4,900,736 39.12%	3,851,364 30.75% 100.00%	2,746,074 21.92% 44.79%	1,230,006 NA	1,028,048 8.21%
	\$/Gal	\$10.63	\$9.11	\$12.50	\$16.21	\$25.88	\$6.31
1992	Quantity % Quantity	1,228,531 100.00%	571,022 46.48%	315,148 25.65% 100.00%	170,815 13.90% 26.45%	45,187 NA	171,546 13.96%

Year	Item	Total Paints & Allied Products (2851)	Total Architectural Coatings (28511)	Total OEM Product Finishes (28512)	Special Purpose Coatings		Total Miscellaneous Products (28515)
					Total (28513)	Refinishes ¹ (2851313)	
	Value % Value	13,538,654 100.00%	5,252,250 38.79%	4,260,334 31.47% 100.00%	2,901,840 21.43% 46.41%	1,346,777 NA	1,124,230 8.30%
	\$/Gal	\$11.02	\$9.20	\$13.52	\$16.99	\$29.80	\$6.55
1993	Quantity % Quantity	1,328,755 100.00%	603,326 45.41%	360,530 27.13% 100.00%	177,013 13.32% 22.16%	39,222 NA	187,886 14.14%
	Value % Value	14,574,244 100.00%	5,570,784 38.22%	4,841,594 33.22% 100.00%	2,905,703 19.94% 42.14%	1,224,395 NA	1,256,163 8.62%
	\$/Gal	\$10.97	\$9.23	\$13.43	\$16.42	\$31.22	\$6.69
1994	Quantity % Quantity	1,420,240 100.00%	640,054 45.07%	386,315 27.20% 100.00%	191,490 13.48% 20.45%	39,161 NA	202,381 14.25%
	Value % Value	15,415,397 100.00%	5,865,814 38.05%	5,139,166 33.34% 100.00%	3,041,246 19.73% 38.48%	1,170,158 NA	1,369,171 8.88%
	\$/Gal	\$10.85	\$9.16	\$13.30	\$15.88	\$29.88	\$6.77

¹ SIC 2851313 consists of automotive, other transportation and machinery refinish paints and enamels, including primers.
Source: BOC-CIR 1992, 1993, 1994, 1995.

APPENDIX D

1992 ECONOMIC CENSUS DATA FOR SELECTED AUTOMOTIVE AND PAINT-RELATED SIC CODES

SIC Code	SIC Description	Number of Companies	Number of Establishments	Number of Employees	Number of Sales (\$000)	Sales per Employee per Establishment (\$000)	Establishment (\$000)
<i>CENSUS OF MANUFACTURERS (BOC-COM 1992)</i>							
2851	Paints and Allied Products	1,130	1,418	51,200	14,973,700	36.1	10,559.7
28512	OEM Product Finishes		286	17,000	3,884,800	59.4	13,583.2
28513	Special Purpose Coatings		179	10,100	3,280,500	56.4	18,326.8
<i>CENSUS OF SERVICE INDUSTRIES (BOC-CSI 1992)</i>							
7532 (part)	Automotive Repair Shops	N/A	2,762	12,008	772,842	4.3	279.8
7532 (part)	Top, Body and Upholstery Repair Shops	N/A	32,281	153,886	11,489,644	4.8	355.9
551	New and Used Car Dealers	N/A	24,380	860,139	333,801,369	35.3	13,691.6